

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Jeff Geller Examiner #: 76466 Date: 19 APR 2002
 Art Unit: 3643 Phone Number 305-2053 Serial Number: 09/735186
 Mail Box and Bldg/Room Location: Park 2nd Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

How "dog steam" is made, specially with water droplets follow a steam to make dog steam.

and
 Have ~~the~~ cotton plants been grafted?
~~to~~

STAFF USE ONLY

Searcher: Jamil TO 61
 Searcher Phone #: 306-5967
 Searcher Location: 6112
 Date Searcher Picked Up: 3/20
 Date Completed: 3/20
 Searcher Prep & Review Time: 30
 Clerical Prep Time: _____
 Online Time: 150

Type of Search

NA Sequence (#) _____
 AA Sequence (#) _____
 Structure (#) _____
 Bibliographic _____
 Litigation _____
 Fulltext _____
 Patent Family _____
 Other _____

Vendors and cost where applicable

STN _____
 Dialog _____
 Questel/Orbit _____
 Dr. Link _____
 Lexis/Nexis _____
 Sequence Systems _____
 WWW/Internet _____
 Other (specify) K10-01



For dry steam needs, use superheat
Chemical Engineering; New York; June 1996;

Volume: 103
Issue: 6
Start Page: 127
ISSN: 00092460

Full Text:
Copyright 1996 The McGraw-Hill Companies

Used where conventional fire tube boilers cannot provide the required superheat or when a specific process requires dry steam, this gas-fired superheater fills the bill. Delivered as a packaged unit with all controls prewired, the superheater can handle pressures to 800 psi and temperatures to 1,200F. Controls include a digital temperature controller, an audible and visual circuit and a high temperature stack detector. The unit is provided in horizontal or vertical configurations. -- Acme Engineering Prod., Inc., Mooers, N.Y.

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File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info

Set Items Description
S1 651 DRY()STEAM?

S2 135724 DROPLET? OR DROP()LET?
S3 4029767 WATER (January 1969)
S4 33065 FALLOUT? OR FALL()OUT?
S5 20 S1 AND S2
S6 15 S5 AND (S3 OR S4)
S7 11 RD (unique items)
S8 0 S1 AND S2 AND S3 AND S4
S9 7867849 EXPLAIN? OR EXPLANAT? OR DESCRIB? OR DESCRIPT?
S10 126 S1 AND S9
S11 5 S1(5N)S9
S12 5 RD (unique items)
S13 5 S12 NOT S7
S14 9 S1(10N)S9
S15 8 S14 AND (S2 OR S3 OR S4)
S16 8 RD (unique items)
S17 4 S16 NOT (S7 OR S12)

7/3,AB/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

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6222988 INSPEC Abstract Number: A1999-10-4755K-029

Title: The flow of wet steam in a one-dimensional nozzle

Author(s): McCallum, M.; Hunt, R.

Author Affiliation: Dept. of Math., Strathclyde Univ., Glasgow, UK

Journal: International Journal for Numerical Methods in Engineering
vol.44, no.12 p.1807-21

Publisher: Wiley,

Publication Date: 30 April 1999 Country of Publication: UK

CODEN: IJNMBH ISSN: 0029-5981

SICI: 0029-5981(19990430)44:12L.1807:FSDN;1-5

Material Identity Number: I128-1999-010

U.S. Copyright Clearance Center Code: 0029-5981/99/121807-15\$17.50

Language: English

Abstract: The formation of **water droplets** in a low-pressure steam turbine, seriously degrades the efficiency of the generator. A model has been developed which includes the nucleation and subsequent growth of the **droplets** as the extra equations to the usual Euler equations for **dry steam**. A feature of the work is that all the equations are cast in Eulerian form compared to much of the previous work which considered the **droplets** in Lagrangian form. The ensuing equations are solved using a second-order upwind TVD scheme which can cope with the steep gradients which occur in the solution. The results for a 1-D nozzle are presented and compared with experimental results.

Subfile: A

Copyright 1999, IEE

7/3,AB/2 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

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1587387 NTIS Accession Number: DE91622707

Wiederbenetzungsexperimente unter atypischen Stroemungsbedingungen wie hohe Flutrate, Wasserschwall oder nasse Dampfstroemung. (Reflood experiments under nontypical flow conditions of alternatively high liquid velocities, plug flow and wet steam flow)

Luebbesmeyer, D.

Paul Scherrer Inst., Villigen (Switzerland).

Corp. Source Codes: 093920000; 5107100

Report No.: PSI-79

Oct 90 71p

Languages: German

Journal Announcement: GRAI9118

In German.

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NTIS Prices: PC A04/MF A01

This report summarizes results of reflood experiments in the directly heated tube (14 mm diam, 1.4 m length) of the PEANUT rig. The experiments were performed in the pressure range of 0.2 to 0.6 MPascal with high flooding velocities up to 2.2 m/s, as well as limited amount of **water** and alternatively with wet steam flow. In addition, some of the experiments were compared to the results of calculations with the thermohydraulic code RELAP5/Mode2.5. A first series of experiments was devoted to reflood with entrance velocities between 0.2 and 2.2 m/s. A second series dealt with intermediate liquid and steam flow at the entrance of the test section to simulate a kind of plug flow within the test section. An attempt was made

to simulate these experiments with the RELAP5/Mod2.5 code but the results were poor for liquid velocities higher than 0.5 m/s. The third series of experiments was devoted to reflood experiments with a limited amount of water, i.e. the content of a container (220 ml max) mounted directly at the entrance of the test section was blown into it by high velocity steam. It was found that a small amount of water (i.e. some water droplets in the steam flow) is enough to partly quench the test section (for 220 ml of water, half of the test section could be quenched). On the other hand, dry steam flow only cooled the test section but did not quench it. Again, an attempt was made to simulate these experiments with RELAP5/Mod2.5, but the code failed to handle the problem of steam water mixing in the container at low pressure (0.2 MPascal) during the period when the steam starts to blow the water out of the container into the test section. (author) 3 refs., 36 figs., 4 tabs. (Atomindex citation 22:026240)

7/3,AB/3 (Item 2 from file: 6)

DIALOG(R)File 6:NTIS

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1522920 NTIS Accession Number: NTN90-0667

Theory Explains Acid Rain Formation from Kilauea Volcano

(NTIS Tech Note)

Department of Energy, Washington, DC.

Corp. Source Codes: 052661000

Aug 90 1p

Languages: English

Journal Announcement: GRAI9020

FOR ADDITIONAL INFORMATION: Contact: Public Information Division, Code 3161, Department of Energy, Sandia National Laboratories, Albuquerque, NM 87185-5800; (505) 844-4207. Refer to announcement 25, No. 1.

NTIS Prices: Not available NTIS

This citation summarizes a one-page announcement of technology available for utilization. Acid rain is known to result naturally when molten lava contacts seawater. Now scientists at Sandia National Laboratories, working with the U.S. Geological Survey (USGS), have generated a new theory of how this natural acid rain forms. In general, the chemical mechanism for the new theory is described as the hydrolysis, or breakdown, of water by magnesium chloride salts. The chloride salts are precipitated from seawater when it is flashed to dryness by the lava. These salts then react with dry steam to produce hydrochloric acid. The resulting mixture of acid and water droplets is transported into the atmosphere in steam plumes. Laboratory analysis of samples from a large plume cloud at Kupapa'u Point, where lava from the Kilauea volcano enters the Pacific, supports the new theory. The results run counter to earlier speculation that the acid rain originates largely by degassing of the lava.

7/3,AB/4 (Item 1 from file: 8)

DIALOG(R)File 8:EI Compendex(R)

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01375852

E.I. Monthly No: EI8308066675

E.I. Yearly No: EI83064793

Title: EXPERIMENTAL AND ANALYTICAL INVESTIGATION OF UNCOVERED CORE HEAT TRANSFER UNDER HIGH PRESSURE, LOW HEAT FLUX CONDITIONS.

Author: Anklam, T. M.

Corporate Source: Oak Ridge Natl Lab, Engineering Technology Div, Oak Ridge, Tenn, USA

Source: Nuclear Engineering and Design v 73 n 3 Dec 1982 p 411-423

Publication Year: 1982

Abstract: A small break loss-of-coolant accident (loca) in a nuclear reactor may lead to a gradual uncovering of the reactor core. Experimental and analytical results are reported from two series of high pressure core uncovering experiments. It was determined that the uncovered core is cooled primarily by convection and radiation to dry steam and that droplets are confined to the immediate vicinity of the mixture level. Spacer grids substantially increased heat transfer at and downstream of the grid. A simple heat transfer model is presented which accurately predicts uncovered core heat transfer at modified wall Reynolds numbers greater than 2000. Results are expected to be of use in modelling small break loss of coolant accidents. 10 refs.

7/3,AB/5 (Item 1 from file: 103)

DIALOG(R)File 103:Energy SciTec

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04001917 EDB-96-085677

Title: An analytical study on the moisture separation performance in dryers

Author(s): Kudo, Yoshiro; Tanaka, Nobuatsu; Miyano, Hiroshi (Toshiba Corp., Kawasaki (Japan). Nuclear Engineering Lab.)

Title: ICONE-4: Proceedings. Volume 1 -- Part A: Basic technological advances

Author(s)/Editor(s): Rao, A.S. (ed.) (General Electric Nuclear Energy, San Jose, CA (United States)); Duffey, R.B. (ed.) (Brookhaven National Lab., Upton, NY (United States)); Elias, D. (ed.) (Commonwealth Edison, Downers Grove, IL (United States))

Conference Title: ICONE 4: ASME/JSME international conference on nuclear engineering

Conference Location: New Orleans, LA (United States) Conference Date: 10-13 Mar 1996

Publisher: New York, NY (United States) American Society of Mechanical Engineers

Publication Date: 1996 p 123-130 (534 p)

Report Number(s): CONF-960306--

ISBN: 0-7918-1226-X

Language: English

Abstract: A boiling water reactor, BWR, could be regarded as a boiler to supply steam flow to its turbine-generator system. Steam is generated in a reactor core, then flows upward into separators as two-phase flow with high void fraction, where steam-flow is separated from the two-phase mixture by centrifugal force. As steam flow from separator outlets includes a small fraction of liquid droplets, known as carryover, which might damage the blades in the turbine if there were no way to sufficiently remove the droplets. A steam dryer is installed above and downstream of the separators to remove moisture and to supply dry steam to the turbine generator through the main steam line. Air-water tests were carried out to investigate dryer performance. The dispersed flow in the dryer test apparatuses was also simulated using a numerical code, which solves the Navier-Stokes equation for continuous gas phase and the Lagrangian equation of droplet motion for dispersed phase, to predict droplet removal efficiency. The numerical results were compared with the test data pertaining to the removal efficiency at each vane stage and overall pressure drop along dryer-vanes. Good agreement was obtained as for the efficiency, while relatively poor agreement was obtained for the pressure drop. The results also showed that the efficiency depended strongly on the droplet size distribution at the dryer inlet, which indicated the importance of estimating the droplets size. Effects of some design parameters on both removal efficiency and breakthrough onset condition are discussed.

7/3,AB/6 (Item 2 from file: 103)

DIALOG(R)File 103:Energy SciTec

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03103202 AIX-22-026240; EDB-91-040636; ERA-16-013231; NTS-91-014084

**Title: Reflood experiments under nontypical flow conditions of
alternatively high liquid velocities, plug flow and wet steam flow**

Original Title: Wiederbenetzungsexperimente unter atypischen
Stroemungsbedingungen wie hohe Flutrate, Wasserschwall oder nasse
Dampfstroemung

Author(s)/Editor(s): Luebbesmeyer, D. (Paul Scherrer Inst. (PSI), Villigen
(Switzerland))

Corporate Source: Paul Scherrer Inst. (PSI), Villigen (Switzerland)

Publication Date: Oct 1990 (61 p)

Report Number(s): PSI-79

Order Number: DE91622707

Language: In German

Abstract: This report summarizes results of reflood experiments in the directly heated tube (14 mm diam, 1.4 m length) of the PEANUT rig. The experiments were performed in the pressure range of 0.2 to 0.6 MPascal with high flooding velocities up to 2.2 m/s, as well as limited amount of water and alternatively with wet steam flow. In addition, some of the experiments were compared to the results of calculations with the thermohydraulic code RELAP5/Mod2.5. A first series of experiments was devoted to reflood with entrance velocities between 0.2 and 2.2 m/s. A second series dealt with intermediate liquid and steam flow at the entrance of the test section to simulate a kind of plug flow within the test section. An attempt was made to simulate these experiments with the RELAP5/Mod2.5 code but the results were poor for liquid velocities higher than 0.5 m/s. The third series of experiments was devoted to reflood experiments with a limited amount of water, i.e. the content of a container (220 ml max) mounted directly at the entrance of the test section was blown into it by high velocity steam. It was found that a small amount of water (i.e. some water droplets in the steam flow) is enough to partly quench the test section (for 220 ml of water, half of the test section could be quenched). On the other hand, dry steam flow only cooled the test section but did not quench it. Again, an attempt was made to simulate these experiments with RELAP5/Mod2.5, but the code failed to handle the problem of steam water mixing in the container at low pressure (0.2 MPascal) during the period when the steam starts to blow the water out of the container into the test section. (author) 3 refs., 36 figs., 4 tabs.

7/3,AB/7 (Item 3 from file: 103)

DIALOG(R)File 103:Energy SciTec

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02946971 JPN-90-009413; EDB-90-164214

Title: BWR type reactor

Author(s)/Editor(s): Yokobori, Seiichi.

Corporate Source: Toshiba Corp., Kawasaki, Kanagawa (Japan)

Patent No.: JP 2-102489 A

Patent Assignee(s): Toshiba Corp., Kawasaki, Kanagawa (Japan)

Priority No.: JP 63-253877

Patent Date Filed: 11 Oct 1988

Publication Date: 16 Apr 1990 (7 p)

Language: In Japanese

Abstract: In a coolant circulation in BWR type reactors, since the mixed stream of steam fluid undergoes a great resistance, the pressure loss due to the flow rate distribution when the coolants flow from the upper

plenum into the stand pipe is increased upon passing stand pipe. Also in the spontaneous recycling reactor, pressure loss is still left upon passing the swirling blade of a gas-liquid separator. In view of the above, a plurality of vertical members each having a lower end opened to a gas-liquid two phase boundary and an upper end directly suspended from a steam dryer to the gas-liquid separator. The liquid **droplets** from the 2-phase boundary heated in the reactor core and formed into a mixed gas-liquid 2-phase stream is directed in the vertical direction accompanied with the steam. The liquid **droplets** spontaneously fallen by gravity from greater ones successively and the **droplets** in the steam abutted against the vertical member are fallen as a liquid membrane. Thus, the gas-liquid separation is conducted, the **dry steam** is directly flown into the steam dryer, thereby capable of providing a gas-liquid separator having gas-liquid separation performance with lower loss than usual. (N.H.).

7/3,AB/8 (Item 4 from file: 103)

DIALOG(R)File 103:Energy SciTec

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01952543 EDB-87-080207

Author(s): Garbett, K.; Mendler, O.J.; Gardner, G.C.; Garnsey, R.; Young, M.Y.

Title: Coincident steam generator tube rupture and stuck-open safety relief valve carryover tests: MB-2 steam generator transient response test program

Corporate Source: Westinghouse Electric Corp., Pittsburgh, PA (USA).

Nuclear Technology Systems Div. Central Electricity Generating Board, Leatherhead (UK). Technology Planning and Research Div. Nuclear Regulatory Commission, Washington, DC (USA). Div. of Reactor Systems Safety Electric Power Research Inst., Palo Alto, CA (USA)

Publication Date: Mar 1987 p 684

Report Number(s): NUREG/CR-4752; EPRI-NP-4787; TPRD/L-3009-R86; WCAP-11226

Order Number: TI87900562

Language: English

Abstract: In PWR steam generator tube rupture (SGTR) faults, a direct pathway for the release of radioactive fission products can exist if there is a coincident stuck-open safety relief valve (SORV) or if the safety relief valve is cycled. In addition to the release of fission products from the bulk steam generator **water** by moisture carryover, there exists the possibility that some primary coolant may be released without having first mixed with the bulk **water** - a process called primary coolant bypassing. The MB-2 Phase II test program was designed specifically to identify the processes for **droplet** carryover during SGTR faults and to provide data of sufficient accuracy for use in developing physical models and computer codes to describe activity release. The test program consisted of sixteen separate tests designed to cover a range of steady-state and transient fault conditions. These included a full SGTR/SORV transient simulation, two SGTR overfill tests, ten steady-state SGTR tests at **water** levels ranging from very low levels in the bundle up to those when the dryer was flooded, and three moisture carryover tests without SGTR. In these tests the influence of break location and the effect of bypassing the dryer were also studied. In a final test the behavior with respect to aerosol particles in a **dry** steam generator, appropriate to a severe accident fault, was investigated.

7/3,AB/9 (Item 5 from file: 103)

DIALOG(R)File 103:Energy SciTec

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01786456 EDB-86-110172

Title: The diffusion of aerosols onto a heated turbine blade

Author(s): Owen, I.; Ariman, T.; Veziroglu, T.N.

Affiliation: Heat and Mass Transfer Lab., Dept. of Mechanical Engineering,
Univ. of Liverpool, P.O. Box 147, Liverpool, L69 3BX

**Title: Proceedings of the international symposium workshop on particulate
and multi-phase processes**

Conference Title: International symposium and workshop on particulate and
multi-phase processes and the 16th annual meeting of the Fine Particle
Society

Conference Location: Miami Beach, FL, USA Conference Date: 22 Apr 1985

Publisher: Clean Energy Research Institute, Coral Gables, FL

Publication Date: 1985 p 66/12-66/13

Report Number(s): CONF-850406-

Language: English

Abstract: When initially dry steam is expanded through a steam turbine it will eventually supersaturate and subsequently nucleate to form a very fine fog of sub-micron droplets (0.01 - 1.0 ..mu..m). The fog droplets which, in themselves, are harmless will deposit onto the stationary guide blades where they will agglomerate to form coarse water which will ultimately lead to erosion damage of the moving blade. The fundamental mechanisms of the deposition process have been extensively studied over a number of years at the University of Liverpool using a modelling technique where solid fluorescent aerosols are injected into the air stream of a low speed wind tunnel containing a short-span cascade of full size blades. Where possible the relevant non-dimensional numbers are matched to those found in the real turbine. It was found that the sub-micron particles possessed insignificant momentum and consequently the deposition process was that of diffusion.

7/3,AB/10 (Item 6 from file: 103)

DIALOG(R) File 103: Energy SciTec

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00416637 AIX-09-395695; ERA-03-055074; EDB-78-115818

Author(s): Bubenzer, E.

**Title: Vapors separator vessel in standing configuration for a nuclear
reactor plant (Patent)**

Patent No.: DE 2401644 B

Patent Assignee(s): Steinmueller (L. u. C.) G.m.b.H., Gummersbach (Germany,
F.R.)

Publication Date: 15 Sep 1977 p 3

Language: German

Abstract: By refinement of the basic patent P2256766.4 liquid droplets down to a size of 10^{sup}-9/ can be separated from radioactive vapors. This is achieved in a simple way by doubling the amount of separators and agglomerators. The upright standing cylindrical vapors separator vessel consists of a lower part with a feed line for the water-steam mixture, an outlet for the waste water enriched in radioactive particles, an inspection hole, a manhole, and an upper part with two identical separating groups arranged one above the other. The vapors fed to the lower part rise through a perforated bottom to the fast separating group, with the exception of a directly condensing portion collected as waste in the lower part. In the first separating group, the mixture passes in cross direction through a separator, an agglomerator, and a second separator; separated waste droplets are directly discharged to the waste water in the lower part. The steam already predried in this way flows through the upper separating group in the same sequence, beginning with a second perforated bottom. Dry steam relieved from radioactive impurities leaves the upper part at the upper end.

7/3,AB/11 (Item 1 from file: 240)

DIALOG(R)File 240:PAPERCHEM

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00145465 PAPERCHEM NO: AB5007394

MOISTENING AND FLATNESS CONTROL OF PAPER WITH FLUIDEX

Pagendarm, R

SOURCE: Wochbl. Papierfabr. 107, no. 17: 670, 672, 674 (Sept. 15, 1979).

[Ger.]

Moistening of paper is essential in some processes. Of the two common procedures, the best quality is obtained by storing large paper webs in a large conditioning chamber with a tropical climate. The moisture uptake is relatively slow and uniform. The great space required is a disadvantage. The second method uses small chambers and moistens the web with liquid water, droplets, or mist. The disadvantage is that penetration of the water past the surface only comes later during storage. The Fluidex processes are new methods for moisture conditioning. Fluidex-1-Plano passes the web through dry steam at 100 C in a tube of the proper length and at the proper speed to heat the web to 100 C. Fluidex-11-Rondo passes the web over two cooled rolls which are each enclosed in condensation chambers. Spontaneous condensation of the steam provides uniform moistening. The flattening of the paper by tension during the uniform moisturizing is an additional advantage of the Fluidex process. (4 fig.)

13/3,AB/1 (Item 1 from file: 8)
DIALOG(R)File 8:EI Compendex(R)
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00566852

E.I. Monthly No: EI7609060263
E.I. Yearly No: EI76032521
Title: SUBGROUP 1: WET AND DRY STEAM SYSTEMS.
Author: Williams, David L.
Source: Magnitude and Deployment Sched of Energy Resour, Conf, Proc,
Portland, Oreg, July 21-23 1975 p 65-67. Publ by Oreg State Univ,
Corvallis, 1975
Publication Year: 1975
Language: ENGLISH
Abstract: Two types of hydrothermal resources are described : dry
steam (vapor dominated) systems and hot water (liquid dominated) systems.
The Geysers in California is an example of the vapor dominated system while
Wairakei in New Zealand is a high grade liquid dominated system.

13/3,AB/2 (Item 1 from file: 103)
DIALOG(R)File 103:Energy SciTec
(c) 2001 Contains copyrighted material. All rts. reserv.

01157145 EDB-83-057173
Title: Geothermal energy resources chart (USA)
Publisher: Penn Well Books, Tulsa, OK
Publication Date: 1982 p 1
Language: English
Abstract: A chart giving the descriptions and illustrations of
hydrothermal reservoirs-- dry - steam and hot-water, geopressured
water and hot dry rock--is presented. A special diagram details the
various sub-surface areas where geothermal resources are found, as well
as above-ground uses in industry, public utilities and private space
heating set-ups. Also included is an inset map of the United States
showing known and potential hydrothermal reservoir areas. (JMT)

13/3,AB/3 (Item 2 from file: 103)
DIALOG(R)File 103:Energy SciTec
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00933738 ERA-07-043135; EDB-82-108590
Title: Geothermal drilling practices of The Geysers
Author(s): Capuano, L.E. Jr.
Title: Second DOE-ENEL workshop for cooperative research in geothermal
energy
Conference Title: 2. DOE-ENEL workshop for cooperative research in
geothermal energy
Conference Location: Berkeley, CA, USA Conference Date: 20 Oct 1980
Publication Date: 1980 p 218-225
Report Number(s): LBL-11555; CONF-801098-
Order Number: DE81029945
Contract Number (DOE): W-7405-ENG-48
Language: English
Abstract: The drilling and completion practices used in drilling deep wells
in The Geysers, a dry steam reservoir, are described. First, the
reservoir geology is described. Then, conventional drilling practices
are discussed including choice of rigs, drilling fluids, bits, and
bottomhole assembly configurations. Directional drilling practices are
described, and problems encountered in drilling deep wells are
summarized. Completion practices, including choice of casing diameters,
setting points, and cement formulations are presented and the design of

the wellhead configuration is explained. The cost of the wells and the major cost contributors are described and explained. Most of the wells are drilled with air into the producing horizons at depths to 3 kilometers. The cost of the wells ranges from \$750K to \$1.5 million.

13/3,AB/4 (Item 3 from file: 103)

DIALOG(R)File 103:Energy SciTec

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00487413 EDB-79-061513

Title: Geothermal paplans picking up steam on coast

Source: Eng. News-Rec. (United States) v 201:25. Coden: ENREA

Publication Date: 21 Dec 1978 p 44-44

Language: English

Abstract: Three proposed geothermal power plants in California are described . A 110 Mw **dry steam** plant is planned for The Geysers geothermal field by the Northern California Power Agency. Construction on the \$57 million plant is to begin in 1979 and be completed by 1981. A 55 Mw plant is also proposed for The Geysers as part of the state Department of Water Resources plan to supply 12% of needed energy by the mid-1980s by geothermal power. Also, a 50 Mw plant is planned for Imperial Valley by Southern California Edison that will convert geothermal brine to steam. The \$70 million plant which is scheduled for completion in 1982 could save an estimated 450,000 bbl of oil a year.

13/3,AB/5 (Item 4 from file: 103)

DIALOG(R)File 103:Energy SciTec

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00152508 EPA-; EDB-76-090755

Author(s): Goguel, J.

Title: Geothermics (Book)

Series/Collection Title: Earth and Planetary Sciences

Publisher: McGraw-Hill Book Co., New York

Publication Date: 1976 p 208

Language: English

Abstract: This volume is the English edition of "La Geothermie," which was originally published in Paris by Doin Editeurs. It is an advanced text and reference book that covers the theories, practical exploration, and economics of geothermal energy. Most of the book is devoted to a discussion, beginning with first principles, of the thermal regime near the earth's surface, with particular reference to the interaction between the temperature field and circulating groundwater. Results are applied to the problem of extracting usable heat and power from geothermal sources. The operation of generating plants using both wet and **dry steam** are extensively described , and methods developed by the author to estimate the power output and useful lifetime to be expected from a given geothermal area are also discussed. One chapter is devoted to the economic and political constraints that must be satisfied if geothermal energy is to become a reality. Topics of interest to students of earth science are also covered.

17/3,AB/1 (Item 1 from file: 8)
DIALOG(R)File 8:EI Compendex(R)
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00900682

E.I. Monthly No: EI8003020872
E.I. Yearly No: EI80035556
Title: DUCT LOSSES IN A GEOTHERMAL STEAM WATER FLOW.
Author: Freeston, D. H.
Corporate Source: Univ of Auckland, NZ
Source: Two-phase Momentum, Heat and Mass Transfer in Chem, Process, and Energy Eng Syst, Pap Presented at the Semin of the Int Cent for Heat and Mass Transfer, Dubrovnik, Yugosl, Sep 4-9 1978 Publ by Hemisphere Publ Co, Washington, DC, 1979 v 2 p 603-615
Publication Year: 1978
Language: ENGLISH
Abstract: The soaring worldwide demand for energy and the depletion of non-renewable resources has prompted extensive research into previously uneconomic energy sources. Geothermal energy is one such source. In New Zealand, at Wairakei, geothermal steam has been utilized for power generation since 1959. Because it is a low enthalpy field, water separation is necessary before delivery to the turbines. At Wairakei the separation is carried out at the well head and **dry steam** is delivered to the station. This paper **describes** experiments carried out on a 10 cm diameter test loop sited on the Wairakei steam field in which pressure measurements have been made on lengths of straight pipe and around various fittings likely to be encountered in a two phase pipe line. Data is presented using a liquid velocity derived from a void fraction correlation and an attempt is made to define the "slug" boundary for the Wairakei steam flows. 9 refs.

17/3,AB/2 (Item 1 from file: 103)
DIALOG(R)File 103:Energy SciTec
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02224762 EDB-88-167504

Title: Further Coso details
Author(s): Rintoul, B.
Source: Geotherm. Hot Line (United States) v 17:1. Coden: GHLID
Publication Date: Jul 1987 p 4-5
Language: English
Abstract: The Coso Geothermal Project is a \$51 million, 25 megawatt geothermal power plant. In exchange for geothermal development rights for about 5000 acres in the Naval Weapons Center, California Energy Company of Santa Rosa will discount electrical energy to the Navy for 25 years. Eight similar power plant units are planned for installation during the next 2 years by the company. Together, they will comprise three, 80-megawatt facilities to be built by California Energy in the Coso Geothermal field at about 1.2 mile intervals. The heat source in the Coso Geothermal field is a shallow body of magma, with the reservoir **described** as basically a hot- water reservoir with some **dry steam**. Reservoir temperatures generally range from 400 to 450/sup 0/F.

17/3,AB/3 (Item 1 from file: 108)
DIALOG(R)File 108:AEROSPACE DATABASE
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00910505 A78-10740

The prospect for geothermal power
SMITH, M. C. (California, University, Los Alamos, N. Mex.)

In: Energy development II. (A78-10729 01-44) New York, Institute of Electrical and Electronics Engineers, Inc., 1976, p. 107-109.

1976

Except for non-electrical applications, the earth's heat can, in general, be utilized only where the geothermal gradient is relatively high, so that higher than normal rock temperatures exist at economically drillable depths. This paper gives a brief **description** of a number of geothermal energy systems, including hydrothermal reservoirs, **dry steam** reservoirs, superheated **water**, geopressured reservoirs and dry hot rock. (B.J.)

17/3,AB/4 (Item 1 from file: 240)
DIALOG(R)File 240:PAPERCHEM
(c) 2002 IPST. All rts. reserv.

00148118 PAPERCHEM NO: AB5010047

LIQUID AMMONIA TREATMENT OF COTTON FABRICS, ESPECIALLY AS A PRETREATMENT FOR EASY-CARE FINISHING

Heap, S. A

SOURCE: Textile Inst. Ind. 16, no. 12: 387-390 (Dec. 1978).

The ammonia- **water** and ammonia- **dry steam** processes for the liquid ammonia treatment of cotton fabrics are **described**. Conventional woven fabric mercerizing usually gives little or no improvement in the response to crosslinking. However, piece mercerization of knits produces a clear increase in strength and a better retention of strength after crosslinking, and it appears that the **water** -based ammonia process gives similar results, i.e., negligible gains for wovens but significant gains for knits. With the **dry steam** process, the amount of crosslinking agent required can be reduced because of the improved resilience and the low internal frictional forces, and strength and abrasion resistance are thus preserved. (3 fig.)

WEST Search History

DATE: Wednesday, March 20, 2002

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side by side			result set

DB=DWPI; PLUR=YES; OP=ADJ

L3	L2 and l1	17	L3
L2	superheat	2749	L2
L1	dry adj steam	508	L1

END OF SEARCH HISTORY

WEST

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Search Results - Record(s) 1 through 17 of 17 returned.

1. Document ID: JP 2001182469 A

L3: Entry 1 of 17

File: DWPI

Jul 6, 2001

DERWENT-ACC-NO: 2001-492705

DERWENT-WEEK: 200154

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TITLE: Underground drilling unit transforms superheated or wet steam generated by boiler to saturated or dry steam in high temperature chamber before ground excavation

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KIMC](#)
[Draw Desc](#) [Image](#)

2. Document ID: RU 2100091 C1

L3: Entry 2 of 17

File: DWPI

Dec 27, 1997

DERWENT-ACC-NO: 1998-411905

DERWENT-WEEK: 199835

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TITLE: Separation of plastics from household rubbish - includes comminution, electromagnetic and blowing treatments, and coagulation of plastics by superheated steam and conversion into fertilisers

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KIMC](#)
[Draw Desc](#) [Clip Img](#) [Image](#)

3. Document ID: RU 2094859 C1

L3: Entry 3 of 17

File: DWPI

Oct 27, 1997

DERWENT-ACC-NO: 1998-285022

DERWENT-WEEK: 199825

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TITLE: Reactor with superheated steam - has vertical tubes set in circular cavity of active zone and having their ends fixed to upper and lower circular rings

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC
Draw	Desc	Clip	Img	Image							

4. Document ID: WO 9608126 A2, US 5611947 A, AU 9535423 A, WO 9608126 A3

L3: Entry 4 of 17

File: DWPI

Mar 14, 1996

DERWENT-ACC-NO: 1996-171892

DERWENT-WEEK: 199617

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TITLE: Induction torch for a steam plasma reactor - generates superheated dry steam economically and uses it to treat or convert waste prods.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC
Draw	Desc	Clip	Img	Image							

5. Document ID: PT 99151 A

L3: Entry 5 of 17

File: DWPI

Jan 31, 1994

DERWENT-ACC-NO: 1994-063039

DERWENT-WEEK: 199408

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TITLE: Anti-pollution system for thermal power station - has steam jet blowing effluent from chimney into collecting system contg. superheated steam coils and cyclones in a destruction chamber

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC
Draw	Desc	Clip	Img	Image							

6. Document ID: SU 1626141 A

L3: Entry 6 of 17

File: DWPI

Feb 7, 1991

DERWENT-ACC-NO: 1992-022197

DERWENT-WEEK: 199203

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TITLE: Determn. of degree of dryness of steam - by comparing pressure corresp. to phase transition of steam from dry saturated to superheated state initial pressure

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC
Draw	Desc	Clip	Img	Image							

7. Document ID: FR 2609149 A

L3: Entry 7 of 17

File: DWPI

Jul 1, 1988

DERWENT-ACC-NO: 1988-229863

DERWENT-WEEK: 198833

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TITLE: Electrical superheating for auxiliary steam supply - by reservoir fed from main boiler pre-heated with electrically-powered superheater element fed to provide supply in emergency

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw Desc	Clip Img	Image									

 8. Document ID: DE 3445609 A, DE 3445609 C

L3: Entry 8 of 17

File: DWPI

Jun 26, 1986

DERWENT-ACC-NO: 1986-170012

DERWENT-WEEK: 198627

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TITLE: Drying wet steam before superheating in dry state - in pressure vessel with condensate regulator projecting from base

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw Desc	Image										

 9. Document ID: DE 3337360 A, CA 1225611 A, DE 3337360 C, DE 3463365 G, DK 8404850 A,

EP 142018 A, EP 142018 B, IL 73202 A, JP 60097086 A, SU 1743352 A3, US 4643832 A, US 4767527 A

L3: Entry 9 of 17

File: DWPI

May 2, 1985

DERWENT-ACC-NO: 1985-111096

DERWENT-WEEK: 198519

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TITLE: Industrial wastes purification - using super heated carrier gas-steam mixt. to separate solid particles

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw Desc	Image										

 10. Document ID: DE 3208953 A

L3: Entry 10 of 17

File: DWPI

Sep 22, 1983

DERWENT-ACC-NO: 1983-771662

DERWENT-WEEK: 198339

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TITLE: Paper making drying steam control - has sensor to close valve and block flow of superheated steam

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw Desc	Image										

 11. Document ID: SE 7809667 A

L3: Entry 11 of 17

File: DWPI

Apr 21, 1980

DERWENT-ACC-NO: 1980-E2893C

DERWENT-WEEK: 198019

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TITLE: Heat exchanger in condenser primary circuit - generates dry steam from saturated superheated steam

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw Desc	Image										

 12. Document ID: BE 879140 A

L3: Entry 12 of 17

File: DWPI

Apr 2, 1980

DERWENT-ACC-NO: 1980-29188C

DERWENT-WEEK: 198017

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Steam separator-superheater - allows adsorption of expansions and contractions of superheater bundles without expansion bends and facilitates extn. of bundles

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw Desc	Image										

 13. Document ID: DE 2754021 A, CH 616498 A, DE 2754021 C, FR 2373671 A, GB 1558544 A, IT 1088378 B, US 4156403 A

L3: Entry 13 of 17

File: DWPI

Jun 15, 1978

DERWENT-ACC-NO: 1978-E8331A

DERWENT-WEEK: 197825

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TITLE: Intermediate steam heater for low pressure turbine - has only one section for bleeding off dry steam with remainder being superheated

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw Desc Image											

14. Document ID: IT 1022069 B

L3: Entry 14 of 17

File: DWPI

Mar 20, 1978

DERWENT-ACC-NO: 1978-001975

DERWENT-WEEK: 197828

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Superheated dry steam unit for drinks machine

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw Desc Image											

15. Document ID: DE 2628786 A, NO 7701327 A, SE 7704377 A

L3: Entry 15 of 17

File: DWPI

Dec 29, 1977

DERWENT-ACC-NO: 1978-A2873A

DERWENT-WEEK: 197802

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TITLE: Saturated steam separator with dry steam superheating - has superheater and several jacketed heating steam supply tubes

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw Desc Image											

16. Document ID: US 3991481 A, CH 616804 A, CH 616804 B, DE 2624138 A, FR 2312275 A, GB 1543990 A, IT 1060690 B, JP 51145175 A, SE 7605985 A

L3: Entry 16 of 17

File: DWPI

Nov 16, 1976

DERWENT-ACC-NO: 1976-90236X

DERWENT-WEEK: 197648

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Recovering volatile organic liquids - using superheated vapour of organic stripping liquid

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw Desc Image											

17. Document ID: GB 1421907 A

L3: Entry 17 of 17

File: DWPI

Jan 21, 1976

DERWENT-ACC-NO: 1976-A7709X

DERWENT-WEEK: 197604

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TITLE: Steam drier for steam boiler - uses injector to reciprocate superheated steam portion to dry steam entering superheater

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMIC](#) |
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 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
 (c) 1998 Inst for Sci Info

Set	Items	Description
S1	6469	COTTON() PLANTS
S2	393580	GRAFT?
S3	13	S1 AND S2
S4	7	S1(5N)S2
S5	3	RD (unique items)
S6	6	S3 NOT S4
S7	6	RD (unique items)
S8	6	S7 NOT S5

5/3,AB/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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12467424 BIOSIS NO.: 200000220926

In vitro shoot-tip grafting improves recovery of cotton plants from culture.

AUTHOR: Luo Jinhua; Gould Jean H(a)

AUTHOR ADDRESS: (a)Forest Science Department, Texas Agricultural Experiment Station, Texas A and M University, College Station, TX, 77843-2135**USA

JOURNAL: Plant Cell Tissue and Organ Culture 57 (3):p211-213 1999

ISSN: 0167-6857

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT: A rapid in vitro shoot-tip grafting (STG) technique was adapted to increase recovery of intact cotton plants from shoots developed in culture. Induction of root organogenesis in cotton shoots is genotype dependent and unreliable. The resulting loss of regeneration potential due to failure to form roots can vary from 30 to 80% according to genotype and represents a significant bottleneck in the overall recovery of plants from culture. If the non-rooting shoots are transgenic, the loss in regenerated plant material can be substantial. In vitro grafting of cotton shoots to seedling rootstock proved to be a simple and reliable method allowing 90-100% recovery of non-rooting shoots from culture. Success of any given graft was directly related to scion size (0.8-1.0 cm) and age (14-35 days) of the seedling rootstock. The method appeared to be genotype independent, and varietal differences between rootstock and scion did not effect the rate of plant recovery from culture.

1999

5/3,AB/2 (Item 1 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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01690649 CAB Accession Number: 860701206

The grafting technique for cotton.

Wang, Y.

Shanxi Acad. of Agric. Sci., Taiyuan, Shanxi Province, China.

China Cottons (No. 2): p.36-37

Publication Year: 1984 --

Language: Chinese

Document Type: Journal article

F1 hybrid plants were rarely obtained and were of weak growth with very high mortality and sterility. Propagation of clones from the F1 plants by grafting was investigated. Young healthy upland cotton plants with 8-9 true leaves were chosen as stocks and new shoots of F1 plants with 2-3 leaves were used as scions. The rootstock plants were topped at the 4th or 5th leaf and wedge grafting was made at the axil of the 3rd leaf. The scion was covered with a test tube which was fastened to a stick inserted in the pot beside the stock. The tube was sheathed in turn in a paper cylinder used for shade. Grafting was carried out at 20-25 deg C. If the 1st graft failed, a 2nd graft was made at the next axil. High survival rates were usually obtained.

5/3,AB/3 (Item 1 from file: 144)

DIALOG(R)File 144:Pascal

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14486756 PASCAL No.: 00-0148717

In vitro shoot-tip grafting improves recovery of cotton plants from culture

JINHUA LUO; GOULD J H

Forest Science Department, Texas A&M University & the Texas Agricultural Experiment Station, College Station TX 77843-2135, United States

Journal: Plant cell, tissue and organ culture, 1999, 57 (3) 211-213

Language: English

A rapid in vitro shoot-tip grafting (STG) technique was adapted to increase recovery of intact cotton plants from shoots developed in culture. Induction of root organogenesis in cotton shoots is genotype dependent and unreliable. The resulting loss of regeneration potential due to failure to form roots can vary from 30 to 80% according to genotype and represents a significant bottleneck in the overall recovery of plants from culture. If the non-rooting shoots are transgenic, the loss in regenerated plant material can be substantial. In vitro grafting of cotton shoots to seedling rootstock proved to be a simple and reliable method allowing 90-100% recovery of non-rooting shoots from culture. Success of any given graft was directly related to scion size (0.8-1.0 cm) and age (14-35 days) of the seedling rootstock. The method appeared to be genotype independent, and varietal differences between rootstock and scion did not effect the rate of plant recovery from culture.

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8/3,AB/1 (Item 1 from file: 50)
DIALOG(R)File 50:CAB Abstracts
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03379474 CAB Accession Number: 971605916

Introgression of glanded-plant and glandless-seed trait from *G. sturtianum* Willis into tetraploid cotton plants.

Mergeai, G.; Irie, V. B.; Dujardin, P.; Baudoïn, J. P.

Faculte des Sciences Agronomiques de Gembloux, Gembloux, Belgium.

1995 Proceedings Beltwide Cotton Conferences, San Antonio, TX, USA, January 4-7, 1995: Volume 1.

Conference Title: 1995 Proceedings Beltwide Cotton Conferences, San Antonio, TX, USA, January 4-7, 1995: Volume 1.

p.513-514

Publication Year: 1995

Publisher: National Cotton Council -- Memphis, USA

Language: English

Document Type: Conference paper

Two trispecific synthetic allotetraploids were obtained using the Australian diploid species *G. sturtianum*, the main cultivated amphidiploid, *G. hirsutum*, and 2 American wild diploid species, *G. thurberi* and *G. raimondii*. Observation in the progeny of these trispecific hybrids revealed the expression of the gossypol gland morphogenesis repressive mechanism of *G. sturtianum* in a rather high proportion of the BC1 seeds (6 of 41). In these materials, the glandless-seed and glanded-plant trait seemed to be linked to a lethal factor. Only one of the 6 totally glandless BC1 seeds gave rise to an adult plant. In vitro culture of the seed and grafting of the plantlet at an early stage on *G. hirsutum* were necessary to obtain a normal development of this genotype. All the other glandless materials died just after germination or never germinated. The surviving plant will be used in a backcrossing programme to introgress the glanded-plant and glandless-seed character into *G. hirsutum*. 13 ref.

8/3,AB/2 (Item 2 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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00143736 CAB Accession Number: 730511358

Contribution to the study of a new disease of cotton: virescence. III.

Results of tests on the transmission of the disease.

Original Title: Contribution a l'etude d'une nouvelle maladie du cotonnier: la virescence. III. Resultats d'essais de transmission de la maladie.

Lagiere, R.; Ouattara, S.

Conference Title: Gourret, J. P.; Maillet, P. L. : Ultrastructure of the mycoplasma in the phloem of cotton affected by virescence.: Ultrastructure des mycoplasmes dans le phloeme du cotonnier atteint de virescence.

Coton et Fibres Tropicales vol. 24 (4): p.403-411

Publication Year: 1969

ISSN: 0010-9711 --

Language: French Summary Language: english; spanish

Document Type: Journal article

The disease of cotton known as 'virescence' that occurs in Upper Volta (see preceding abstract) and adjacent parts of Mali appears to be the only disease of the yellows type yet recorded from Africa. Diseases of this type known from Europe and America are generally transmitted by Cicadellids. In studies in Upper Volta, transmission was obtained by grafting but not by mechanical means. No symptoms developed when healthy potted cotton plants were placed among infected cotton plants in the field. 6 ref.

8/3,AB/3 (Item 3 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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00074093 CAB Accession Number: 731305716

Study of varietal resistance of cotton plants to Chad mosaic disease

I. Choice of a screening method.

Original Title: Etude de la resistance varietale des cotonniers a la mosaique du Tchad I. Choix d'un crible de selection.

Cateland, B.

Inst. Rech. Coton Textiles, Bebedjia, Chad.

Coton et Fibres Tropicales vol. 28 (2): p.301-305

Publication Year: 1973

ISSN: 0010-9711 --

Language: French Summary Language: english; spanish

Document Type: Journal article

The method uses 2 vars. as controls: BJA 592, which is susceptible, and HG9, resistant (RPP 50, 3782). It is based on the frequency of occurrence of diseased seedlings and the degree of infection of affected plants; it was found to be valid in both natural and artificial (by grafting) infections.

8/3,AB/4 (Item 1 from file: 76)

DIALOG(R)File 76:Life Sciences Collection

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00608363 0377437

Cotton reddening in the Gezira.

Yassin, A.M.; Dafalla, G.A.

Bot. & Plant Pathol. Sect., Gezira Agric. Res. Stn., Wad Medani, Sudan

TROP. PEST MANAGE. vol. 28, no. 3, pp. 312-313 (1982.)

DOCUMENT TYPE: Journal article LANGUAGE: ENGLISH

SUBFILE: Virology Abstracts; Microbiology Abstracts Section A: Industrial and Applied Microbiology; Entomology Abstracts

Reddening (anthocynosis), other than the long known "Hopper burn", has caused increasing concern in the Gezira locality of Sudan ever since it became significant some years ago. In glasshouse tests, this abnormality was graft-transmissible in 11 out of 17 tests when scions from naturally diseased cv. Barac (69)2 plants showing typical symptoms were grafted on the healthy cotton stock of the same variety. This indicated that a virus or virus-like agent was involved. The tests were also extended to *Sida alba* L. as this plant was found to exhibit similar reddening symptoms when present in the vicinity of naturally diseased cotton plants in the field. Insect transmissions were carried out in the usual way using *Beiresia tabaci*. No transmissions occurred from naturally diseased cotton to healthy cotton in preliminary test using a total of 10 test seedling of cv. Barac (67)B. In transmissions from naturally diseased cotton to *S. alba* eight out of ten successful transmissions were obtained when some 100-200 *B. tabaci* adults were confined to a natural disease source of cv. Barac (69)2 cotton.

8/3,AB/5 (Item 1 from file: 98)

DIALOG(R)File 98:General Sci Abs/Full-Text

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04008331 H.W. WILSON RECORD NUMBER: BGSI99008331

The 1998 National Medal of Technology.

Cooley, Denton A

Scientific American (Sci Am) v. 280 no3 (Mar. '99) p. 46-9

SPECIAL FEATURES: 11 ISSN: 0036-8733

LANGUAGE: English

COUNTRY OF PUBLICATION: United States

WORD COUNT: 2882

ABSTRACT: The recipients of the 1998 National Medal of Technology are listed, and their work is briefly discussed. The award, one of the highest civilian commendations that the United States can bestow, recognizes individuals, teams, and corporations whose technological breakthroughs have resulted in new or significantly improved products, processes, or services. Photographs of the winners and additional information can be found on the Scientific American Web site: (<http://www.sciam.com/explorations/1998/121498medal/index.html>).

8/3,AB/6 (Item 1 from file: 203)

DIALOG(R)File 203:AGRIS

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01206759 AGRIS No: 87-053754

Diagnosing of cotton leaf roll disease by serological and electron microscopic techniques (Kan winitchai rok baingik fai duai technique thang serum withthaya lae klong chunlathat electron)

Worawan Sakwong

Kasetsart Univ., Bangkok (Thailand). Graduate School

Thesis Degree: Thesis (M.S. in Agriculture)

Publisher: , Bangkok (Thailand), 1985, 74 leaves

Language: Thai Summary Language: English, Thai

Cotton plants infected with leaf roll disease showed leaf rolling, downward curling of leaf margin, small leaf, vein clearing, vein thickening, stunting and abnormal growth. The disease was transmitted by side cleft grafting and cotton aphids (*Aphis gossypii* Glover.) to 57.6 and 3.2% of DPSL variety of cotton respectively. In an attempt to purify the causal agent of cotton leaf roll disease, 7 methods of alternative centrifugation were used. The purified preparations from both healthy and diseased plants obtained from all methods had the same pattern of ultraviolet light absorbancy. A single opaque band about 35-40 millimeter below the miniscus was observed in sucrose density gradients. This band contained flexuous rod particles of about 600-720 nanometer in length when observed under the electron microscope. The cotton leaf antiserum gave a satisfactory titre of 1: 1024 by precipitin test. Among the serological techniques used in detection for The cotton leaf roll agent, agar diffusion test gave clearer reaction than precipitin test and immune-electron microscopy. The cotton leaf roll agent in viruliferous aphids were detected only from the fresh sample. The healthy sap-absorbed antiserum gave clearer precipitation bands than the unabsorbed one. Detection of the cotton leaf roll antiserum and cotton leaf roll gammaglobulin showed isometric particles with a diameter of 20-28 nanometer in the infected tissues. From this experiment the causal agent of cotton leaf roll disease was unidentified. However, the presence of this disease were detected by serological techniques, of which agar diffusion test was found to be the most effective one.

File 9:Business & Industry(R) Jul/1994-2002/Mar 18
(c) 2002 Resp. DB Svcs.
File 16:Gale Group PROMT(R) 1990-2002/Mar 19
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File 18:Gale Group F&S Index(R) 1988-2002/Mar 19
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File 160:Gale Group PROMT(R) 1972-1989
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File 636:Gale Group Newsletter DB(TM) 1987-2002/Mar 19
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Set	Items	Description
S1	1045	COTTON() PLANTS
S2	76129	GRAFT?
S3	3	S1 AND S2
S4	2	RD (unique items)

4/3,K/1 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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02700566 Supplier Number: 43606994 (USE FORMAT 7 FOR FULLTEXT)

TOLERANCE EXEMPTION PROPOSALS PENDING ON DEC. 31, 1992

Pesticide & Toxic Chemical News, v21, n13, pN/A

Jan 27, 1993

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 2057

... ADJUVANTS. Methyl methacrylate-2-sulfoethyl methacrylate-dimethyl-aminoethyl methacrylate-glycidyl methacrylate-styrene-2-ethylhexyl acrylate graft copolymer (minimum molecular weight 9,600) proposed to be exempted from tolerance requirements when used...

...Page 5).

AMMONIUM THIOSULFATE. To exempt from tolerance requirements in or on potato vines and cotton plants. Kerley Enterprises April 3, 1991 (April 10, 1991, Page 6).

AQUEOUS EXTRACT OF ROOTS, GALLS...

4/3,K/2 (Item 1 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

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06116975 SUPPLIER NUMBER: 12545140 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Resetting a plant's thermostat.

Comis, Don

Agricultural Research, v40, n7, p14(3)

July, 1992

ISSN: 0002-161X LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 1631 LINE COUNT: 00126

... longer that plants stayed in the dark, the narrower their temperature optimum for greening became. Cotton plants, for example, turned sufficiently green within a range of 68(deg)F to 104(deg)...

...evaluate apple and peach trees with naturally broad temperature tolerances.

With orchard trees grown on grafted roots, even more cropcustomizing is theoretically possible. Roots can be selected from the trees best...

WEST

End of Result Set

L6: Entry 1 of 1

File: DWPI

Dec 21, 1976

DERWENT-ACC-NO: 1977-50005Y

DERWENT-WEEK: 197728

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TITLE: Isolating anabasine alkaloid from aq. soln. by adsorption - on modified, carboxyl gp.-contg. polyvinyl alcohol fibres, prod. suitable for cotton plant pests control

PATENT-ASSIGNEE:

ASSIGNEE	CODE
LENINGRAD TEXTILE LIGHT	KIRO
UNIV TASHKTEXTILE LIGHT	UYTS

PRIORITY-DATA: 1975SU-2181287 (October 3, 1975)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
SU 537084 A	December 21, 1976		000	

INT-CL (IPC): C07G 5/00

ABSTRACTED-PUB-NO: SU 537084A

BASIC-ABSTRACT:

The adsorbent is a cation-exchange fibre based on polyvinyl alcohol (PVA) and polyacrylic acid or maleic anhydride. By this method the process is accelerated and the yield of arabasine is increased.

When the polyvinyl alcohol fibres are esterified with maleic anhydride, the process is carried out at 120 degrees C in the presence of 5% of maleic acid as catalyst. The ion exchange is effected with carboxylic gps. (fibres I). Alternatively, carboxylic gps. are introduced by grafting acrylic acid onto polyvinyl alcohol fibres (fibres II); this process comprises acetalising PVA fibres with malealdehyde, activating with H₂O₂ and H₂SO₄, and grafting acrylic acid in presence of FeSO₄ catalyst.

TITLE-TERMS: ISOLATE ANABASINE ALKALOID AQUEOUS SOLUTION ADSORB MODIFIED CARBOXYL GROUP CONTAIN POLYVINYL ALCOHOL FIBRE PRODUCT SUIT COTTON PLANT PEST CONTROL

DERWENT-CLASS: A97 C02

CPI-CODES: A04-F04; A10-E07A; A10-E09B; A10-E23; A12-M04; A12-W11;

C07-D04; C07-D05; C12-N01;

CHEMICAL-CODES :

Chemical Indexing M2 *01*

Fragmentation Code

M126 M116 M320 M280 F431 F433 N160 P340 P002 M510
M522 M530 M540 M720 M413 M902

Chemical Indexing M2 *02*

Fragmentation Code

M126 M116 M320 M280 F431 F433 N160 P340 P002 M510
M522 M530 M540 M720 M413 M902

Multipunch Codes: 010 034 035 037 04- 07- 074 075 076 09& 15& 231 232 239 244 245 264 266 267 27& 271
481 483 532 533 546 58- 623 624 642 679 691 721 723 010 034 035 037 04- 07- 074 075 076 09& 15& 231 232
239 244 245 264 266 267 27& 271 481 483 532 533 546 58- 623 624 642 679 691 721 723

Return to the Cognitive Enhancement Research Institute [Home Page](#) or [GHB Page](#).

GHB Letter

19 March 2000

To the Alabama Senate Committee on the Judiciary

re: *Further difficulties with the new SB 305.*

Dear Senate Judiciary members,

The new SB 305 is much improved. Attorney General Bill Pryor has done a creditable job in responding to issues raised in your committee and drafting language to resolve some of these difficulties. Allowing physicians to prescribe GHB and excepting food-based GHB are steps in the right direction. However, some of the language is overtly problematic. In addition, I still have some concerns that the extremely tortuous syntax and convoluted language in that section make the bill vague, difficult to understand, and open to misinterpretation.

For example, if a physician makes a simple procedural mistake while prescribing GHB, is that physician thereby guilty of "trafficking in illegal drugs?" It would appear so, by my reading. Similarly, if a physician makes a "compassionate" (ethically compelling) exception to a protocol, are they guilty of trafficking in illegal drugs? Again, it would appear so. If a doctor fails to make a notation in a medical chart, which might be considered a professional deficiency subject to disciplinary action by the medical board, would that trivial violation of regulations render an erring physician liable to felony prosecution in situations where GHB is being prescribed? There are no shades of gray in SB 305.

A more obvious and far more serious deficiency in the bill is the inclusion of "any substance for which gamma-hydroxybutyrate is an immediate precursor." GHB is an immediate precursor to:

- 1) **gamma-aminobutyric acid (GABA)**, an amino acid and dietary supplement which has been sold throughout the United States for twenty-five years;
- 2) **succinic acid**, a nutritional supplement in metabolic formulas, vitamin esters and mineral chelates, in industrial and retail commerce for more than 50 years;
- 3) **gamma-hydroxybutanol** (1,4-butanediol, butylene glycol, tetramethylene glycol) a monomer for polyester fiber (clothing), polycarbonate resins (water bottles), polyurethane elastomers (Spandex), polyvinylpyrrolidones (blood plasma extenders and PVP-iodine), and polyether plastics, and a common ingredient in cosmetics, skin lotions, perfumes, and other consumer products;
- 4) **gamma-butyrolactone (GBL)**, a monomer for polyester fiber and polycarbonate plastics, and an industrial and consumer solvent (automotive parts cleaners, floor strippers, paint strippers, nail-polish removers, paints and varnishes); and
- 5) **polyester fiber** (poly-GHB is a polyester made from GHB).

This latter item (5) has potential economic importance to the cotton industry. Innovative scientists have grafted GHB genes into cotton plants, which, when grown, produced "natural" cotton-polyester blend fiber. The amount of poly-GHB in the cotton was only 0.4% for this "first effort," but the scientists were hopeful to be able to increase the yield to commercially viable levels with further research. The new SB 305 would criminalize commercial applications of such efforts. The GHB-enhanced cotton would not be "naturally occurring unadulterated biological tissue."

The levels of some of the above GHB metabolites are enhanced above their natural "endogenous concentrations" by cooking and food processing. Consequently, Alabama citizens and businesses may accidentally and/or inadvertent violate the new SB 305. There is some evidence that suggests that the *aging of meat* might actually *increase GHB concentrations*. This has not been clearly established, but it is another potential problem with the "endogenous

concentrations" language.

Why would Alabama want to criminalize *metabolites* of GHB, anyway? I cannot think of a single reason. However, it does seem likely that Bill Pryor meant to write "any substance which is an immediate precursor to gamma-hydroxybutyrate." This alternate language would refer to substances that would *produce* GHB, not *result from* GHB.

Despite any strategic improvement from this change, this alternate language would still be troublesome. Immediate precursors to GHB include:

- 6) monosodium glutamate (MSG), the essential amino acid, dietary supplement and flavor enhancer (*i.e.*, "Accent"), which converts to GHB in one step using nitrous acid (HNO₂, a deaminating agent); and
- 6) poly-GHB (the polyester mentioned above), which hydrolyzes into GHB in one step using alkali and heat.

It seems reasonable that MSG-fortified foods could not be considered "naturally occurring unadulterated biological tissues." The act of making vegetable and meat broths dramatically enhances the amount of free MSG in foods (hydrolysis of proteins releases MSG). This, also, would appear to violate the new SB 305 by increasing the levels of an immediate precursor of GHB beyond "endogenous concentrations." Furthermore, since MSG is almost exclusively intended for human consumption, imports of MSG into Alabama would become illegal. The standard, commercial, hundred-pound bag of MSG would invoke a "mandatory minimum term of imprisonment of 25 calendar years" and a half-million dollar fine.

My final objection is easily fixed. Add "or pharmacist" after "physician" when addressing medical exemptions for GHB. Or change it to "duly licensed medical professionals" to include everybody who is authorized to dispense or prescribe GHB.

Sincerely,

Steven Wm. Fowkes
Executive Director

cc: Bill Pryor
Ward Dean, M.D.

HOUSTON'S LEADING INFORMATION SOURCE

HoustonChronicle.com

Cold snaps call for clever cover ups

Houston Chronicle; Houston, Tex.; Nov 3, 2001; KATHY HUBER;

Sub Title: [2 STAR Edition]

Column Name: Kathy Huber

Start Page: 1

Abstract:

A: Our winters are generally mild with occasional cold snaps, and plant damage depends not only on how low the thermometer drops but also on how many hours the temperature stays below freezing. Most of our trees and shrubs overwinter easily with a good layer of mulch over the root system. Unless the soil is already moist from rain, water before a predicted freeze.

Tender hibiscus that are grown in containers can be moved to the garage. Hibiscus in garden beds can be protected as mentioned above. If these hibiscus are grafted, be sure to protect the graft or you'll get growth from below the graft, i.e. the rootstock, the next spring. The flowers on this rootstock growth will differ, of course, from those exotic ones above the graft.

The Confederate rose (Hibiscus mutabilis) is sometimes called the cotton rose since the large, palmate foliage and flowers resemble those of the cotton plant. Confederate rose will mature into a large shrub or small tree and does best in a well-draining, acidic, fertile soil.

Full Text:

Copyright Houston Chronicle Publishing Company Division, The Hearst Corporation (the "Houston Chronicle") Nov 3, 2001

Mail garden questions to Kathy Huber, Garden Editor, Houston Chronicle, P.O. Box 4260, Houston 77210. The bulk of mail prevents individual replies to each Unpublished letter.

What is the best way to protect young trees and shrubs, particularly hibiscus, from temperature dips below freezing? - E.M., Katy

A: Our winters are generally mild with occasional cold snaps, and plant damage depends not only on how low the thermometer drops but also on how many hours the temperature stays below freezing. Most of our trees and shrubs overwinter easily with a good layer of mulch over the root system. Unless the soil is already moist from rain, water before a predicted freeze.

Shrubs may suffer some freeze burn on the foliage during an especially cold period, but many are root-hardy, so come spring, you will get new growth.

If you wish to protect a plant's top as well as the roots, cover it with a blanket or sheet, then add a layer of plastic. If you use only plastic, leaves will burn when cold. Remove the plastic as the weather warms as heat buildup can harm or kill a plant.

You can also construct a greenhouse-like structure over plants for added protection. You can place large tomato cages over smaller plants, then cover with a blanket and plastic. Or, build a wooden frame around and over the plant(s) and drape a cover over it. Some people build such a structure over tender fruit trees and even place a heat lamp inside the "greenhouse."

Tender hibiscus that are grown in containers can be moved to the garage. Hibiscus in garden beds can be protected as mentioned above. If these hibiscus are grafted, be sure to protect the graft or you'll get growth from below the graft, i.e. the rootstock, the next spring. The flowers on this rootstock growth will differ, of course, from those exotic ones above the graft.

Hibiscus that lose most top growth during freezing weather will spend months regrowing when the weather warms, and flowers may not appear until September.

Q: Our duranta bloomed this summer. Does it need to be pruned? If so, when?

I have a mango and an avocado in 16-gallon pots. These were started from seeds and are now about 6 feet tall. I am planning on planting them in the ground. When is the best time to do this, and what location is best? Do you think they will survive our winters? - C.X., Sugar Land

A: You can prune your durantas early spring through the summer. I was surprised to find the durantas in our garden to be such fast growers and pleased that they flower spring to frost. These plants easily tolerate pruning. I pruned hard in early spring and have pruned periodically this summer. Pruning encourages new, full growth, and since this would be especially vulnerable to cold weather, I have finished pruning for the year.

If you plant your avocado in the garden, do so on the warmest side of your home, perhaps the south side. Protect the avocado during winter as long as the plant is a manageable size. When it becomes too large to cover, you will likely see top damage during freezing weather. And you may lose it completely should we have one of those rare spells like that in the early '80s that killed camphor trees.

Gardeners, however, have occasionally reported crops from large avocado trees.

Mangoes are cold-tolerant only to about 30 degrees. Your best chance of getting fruit is to plant the mango in a bed where it will grow larger than in a pot. But you must be able to protect it, so look for a sheltered area on the south side of your home.

Mango trees are evergreens that grow 60 or more feet tall in tropical regions. The tree will fruit four to six years after planting, and it needs hot, dry periods to set and produce a fruit crop. Chances for mango blooms increase about the third year. Meanwhile, the foliage is attractive.

Occasionally, local gardeners report their mangoes produce after a mild winter.

Keep in mind that the mango, which is related to poison ivy, contains a caustic sap, and touching the skin of the fruit can trigger irritation.

Q: I want to transplant a penta, a holly fern and a maidenhair fern. When is the best time to do this?

When should shrubs be cut back, before or after winter? - L.K., Bay City

A: You can transplant the two ferns now. Make sure you finish with a good layer of mulch, and don't let the roots dry out. I would be tempted to wait until early spring to move the penta, but you could likely get away with moving it now. However, these long-flowering plants don't always pull through winter, so keep this in mind if you are going to move it to a less protected area.

I would suggest waiting until winter ends to cut back shrubs. Pruning now can encourage tender new growth that can easily burn in a freeze.

Q: I have a crape myrtle that was planted this year and have been told by some to trim it back. Some have told me not to cut it.

I have two Confederate roses and was told to plant them where they get water all the time, and others have told me it doesn't matter as long as I water once in a while. I don't know what to do since I have never had these plants. - J.H., Shepherd

A: You do not have to prune the crape at all. But should you wish to remove any weak wood (growth smaller than a

pencil and/or crossing branches) you can do so in January or early February.

You can remove dead wood, water sprouts along branches and root suckers any time. And if you remove spent flowers after the first summer flush, you may get more blooms.

By pruning properly, you'll encourage a clean, strong, naturally shaped skeleton. I do not believe in butchering crape myrtles, pruning them so hard only stubs remain. This only promotes overly vigorous, weak growth. And it's ugly.

Your Confederate rose needs only an average amount of water, not a constant dose. And good drainage is important.

The Confederate rose (*Hibiscus mutabilis*) is sometimes called the cotton rose since the large, palmate foliage and flowers resemble those of the cotton plant. Confederate rose will mature into a large shrub or small tree and does best in a well-draining, acidic, fertile soil.

Sun will produce the best blooms in summer and fall. The flowers vary with the variety; many are 5 to 6 inches in diameter.

The species bears double blooms that open white and change to deep pink by afternoon. The blooms close at night.

This deciduous, old-fashioned, billowy shrub can reach 8-15 feet in height and several feet in width.

Top growth may be nipped during freezing weather, but it is root-hardy; multitrunked forms are common.

Propagation is by cuttings and seed. Cuttings root most easily in early spring, but you can take cuttings most any time. Sow the seed in small pots, then repot as necessary.

Plants sometimes succumb to cotton root rot in alkaline soils. Acidifying the soil with sulfur around susceptible trees or shrubs may delay or prevent root-rot infection.

Credit: Staff

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